

Marked-up Claims

1. (Once Amended) A passive touch system comprising:

a [passive] touch surface;

at least two cameras associated with said touch surface, said at least two cameras acquiring images of said touch surface from different locations and having overlapping fields of view; [and]

[a processor receiving and processing images acquired by said at least two cameras to detect the existence of a pointer therein and]

a digital signal processor associated with each camera, the digital signal processors associated with said at least two cameras selecting pixel subsets of images acquired by said at least two cameras and processing pixel data acquired by the selected pixel subsets to generate pointer characteristic data when a pointer exists in said acquired images; and

a master digital signal processor in communication with said digital signal processors, said master digital signal processor receiving pointer characteristic data from said digital signal processors and triangulating the pointer characteristic data to determine the location of said pointer relative to said touch surface.

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4. (Once Amended) A passive touch system [as defined in] according to claim [3] 1 wherein said [processor determines] digital signal processors generate pixel characteristic data when the pointer is in contact with said touch surface and when said pointer is hovering above said touch surface.

6. (Once Amended) A passive touch system [as defined in] according to claim [5] 4 wherein said selected pixel subsets are determined during an alignment routine.

8. (Once Amended) A passive touch system [as defined in] according to claim [7] 1 wherein said [pixel] pointer characteristic data includes a median line of the pointer.

9. (Once Amended) A passive touch system [as defined in] according to claim 8 wherein said [pixel] pointer characteristic data is packaged by [the] said digital signal processors [associated with each image sensor and lens assembly] into pointer information packets (PIPs).

11. (Once Amended) A passive touch system [as defined in] according to claim [7 including an image sensor and lens assembly] 1 wherein said touch surface is substantially

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rectangular and wherein a camera is located adjacent each corner of said touch [screen] surface.

13. (Once Amended) A method of detecting the position of a pointer relative to a [passive] touch surface comprising the steps of:

acquiring multiple images of a pointer relative to said touch surface [from different locations using cameras having overlapping fields of view; and];

selecting pixel subsets of said acquired images; and
processing pixel data acquired by said [images] pixel subsets to detect the existence of [a] said pointer therein and to determine the location of said pointer relative to said touch surface using triangulation.

16. (Once Amended) The method of claim [15] 13 wherein during said processing step, the [images are] pixel data is processed to determine when said pointer is in contact with said touch surface and when said pointer is hovering [above] over said touch surface.

18. (Once Amended) The method of claim [17] 16 wherein during said processing step the existence of said pointer is determined by calculating median lines of the pointer

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and wherein the location of said pointer is determined by calculating the intersection point of median lines and using triangulation to determine the coordinates of said intersection point.

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